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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/601,980

06/23/2003

Bruce K. Wachtmann

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1368

2101

7590

03/10/2005

BROMBERG & SUNSTEIN LLP
125 SUMMER STREET
BOSTON, MA 02110-1618

EXAMINER

TRAN, LONG K

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/601,980

Applicant(s)

WACHTMANN ET AL.

Examiner

Long K. Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on January 10, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 20 is/are pending in the application.
- 4a) Of the above claim(s) 16 - 20 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 - 15 is/are allowed.
- 6) ☒ Claim(s) 1 - 3 and 5 - 8 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>09/26/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. This office acknowledges of the following items from the Applicant:
Information Disclosure Statement (IDS) filed on October 26, 2004.
The references cited on the PTO -1449 form have been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 3 and 5 – 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Wachtmann et al. (US Patent Application Publication No. 2004/010444).

The applied reference has a common inventor with the instant application.
Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claims **1** and **8**, Wachtmann et al. disclose method of forming a MEMS device, the method comprising: producing a device layer wafer 32 (figs. 3 – 8), wherein producing comprises: providing a material layer 32 (figs. 3 – 8); coupling a conductor 16 (figs. 3 – 8) to the material layer; and forming at least one conductive paths 24, 30 (figs. 3 – 8) through at least a portion of the material layer to the conductor; providing a handle wafer 36 (figs. 3 – 8); and coupling the produced device layer wafer to the handle wafer, the conductor being contained between the material layer and the handle wafer .

Regarding claim **2**, Wachtmann et al. disclose the material layer has an exposed top surface and conductive paths 24, 30 (figs. 6 – 8) extending to the exposed top surface.

Regarding claim **3**, Wachtmann et al. disclose removing a portion of the material layer to substantially expose the at least one conductive path [0034].

Regarding claim **5**, Wachtmann et al. disclose applying an insulator 34 (figs. 4 – 9) between the material layer and the conductor, the insulator coupling the conductor to the material layer.

Regarding claim **6**, Wachtmann et al. disclose the conductive path 24 is formed from a first semiconductor material (polysilicon [0027]) and the material layer is formed from a second semiconductor material (amorphous silicon [0026]).

Regarding claim **7**, Wachtmann et al. disclose conductive path 30 is an anchor [0030].

Allowable Subject Matter

4. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 9 – 15 are allowed.

6. The following is an examiner's statement of reasons for allowance: Claims 4 and 9 – 15 are allowable over the prior art of record because none of the prior art whether taken singularly or in combination, especially when these limitations are considered within the specific combination claimed, to teach:

oxidizing an exposed top surface of a material layer 32 to optically distinguish the end of a conductive pathway 30 from the material layer as cited in claim 4 and independent claim 9; and among other limitations as cited in the independent claim 9.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

7. Applicants' arguments have been fully considered but they are not persuasive.

8. The applicants argue:

" the 444 patent teaches providing a wafer already having a in implanted electrode and an attached handle layer, and then forming a conductive pathway through the device layer to the internal conductor. By contrast, claim 1 is directed to a method of manufacturing a MEMS device wherein a conductive path is formed through a device layer to an internal conductor, before a handle layer is attached"

The examiner responds:

The examiner agrees that "the 444 patent teaches providing a wafer already having a in implanted electrode and an attached handle layer, and then forming a conductive pathway through the device layer to the internal conductor". However, claim 1 do not cite any steps or sequences in the claimed method. The claimed languages do not cite the limitations "a conductive path is formed through a device layer to an internal conductor, before a handle layer is attached". Therefore, the "444 patent" has met all limitations as claimed.

For the above reason, it is believed that the rejections should be sustained. Feature of an invention not found in the claims can be given no patentable weight in distinguishing the claimed invention over the prior art.

Conclusion

9. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

30. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long K. Tran whose telephone number is 571-272-1797. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Long Tran *UKT*

March 4, 2005


David Nelms
Supervisory Patent Examiner
Technology Center 2800